

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Reviewed by: Ralph Gosney, P.E.

GENERAL INFORMATION:

Name:	The Somerset Refinery, Inc.
Address:	501 Refinery Road, Somerset, Kentucky 42501
Date application received:	July 28, 2005
SIC/Source description:	2911, Petroleum Refinery
Source ID #:	21-199-00010
Source A.I. #:	3842
Activity #:	APE20040003
Permit number:	V-05-057

APPLICATION TYPE/PERMIT ACTIVITY:

<input checked="" type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input type="checkbox"/> Permit modification	<input type="checkbox"/> Conditional major
__Administrative	<input checked="" type="checkbox"/> Title V
__Minor	<input type="checkbox"/> Synthetic minor
__Significant	<input checked="" type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input checked="" type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☐ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	Potential (tpy)
PM	2.87	2.12
PM ₁₀	2.87	2.12
SO ₂	11.7	0.17
NO _x	15.1	20.63
VOC	40.5	34.84
CO	3.60	56.26
Individual HAP >10 tpy (by CAS)	NA	NA
Total HAPs > 25 tpy	NA	NA

- (1) Please refer Appendix A of the Statement of Basis for detailed emission calculations (Pages 1 through 7).
- (2) Actual emissions are based on Emissions Inventory System report for 2005, but the actual emissions may be lower due to new emission factors, monitoring readings, or testing results in the application.

SOURCE DESCRIPTION:

The Somerset Refinery (Somerset) is a petroleum refinery facility (SIC code 2911) which processes crude oil purchased from wells in Kentucky and Tennessee. The purchased crude oil is delivered by truck to the facility, as there are no pipeline, rail, or water deliveries to the facility. Somerset has a listed feed capacity of 5,500 barrels per day of operation.

Facility equipment consists of several combustion units burning refinery fuel gas, storage tanks, loading rack, sulfur removal operation, pipeline components and a flare. The potential to emit (as defined in 401 KAR 52:001, Section 1 (56)) of any nonhazardous regulated air pollutant is less than 100 tons per year, any single HAP is less than ten (10) tons per year, and the combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is a minor source pursuant to the provisions of 401 KAR 52:040. However, the permittee has decided to voluntarily apply for, and request issuance of, a Title V permit pursuant to 401 KAR 52:020. This permit is the first issue Title V operating permit for this source. Additionally, this source is a minor source for HAPs and not subject to NESHAP (40 CFR 63, Subparts R, CC and UUU) requirements.

This source is subject to several NSPS requirements including 40 CFR 60, Subparts J, XX, GGG, K, and Kb.

EMISSION AND OPERATING CAPS DESCRIPTION:

Pursuant to Operation Permit No. O-84-124 (Revised), issued on February 13, 1987, the permittee shall not exceed the following maximum processing/production rates:

- (a) Crude Oil 2,242,800 barrels per year
- (b) Gasoline 427,200 barrels per year
- (c) Naphtha 358,848 barrels per year
- (d) Kerosene 142,400 barrels per year

In addition, to preclude the applicability of 40 CFR Part 63.640 (Subpart CC), "National Emission Standards for Hazardous Emissions from Petroleum Refineries", total annual source-wide emissions

shall not exceed the following specific limitations on a twelve (12) consecutive month basis:

- (1) Volatile organic compound (VOC) emissions shall not equal or exceed 90 tons per twelve (12) consecutive month period;
- (2) Emissions of any single hazardous air pollutants (HAP) shall not exceed 9 tons per twelve (12) consecutive month period; and
- (3) Emissions of combined hazardous air pollutant (HAPs) shall not exceed 22.5 tons per twelve (12) consecutive month period.

OPERATIONAL FLEXIBILITY:

None